The Internet in Alberta Agriculture, Food & Rural Development

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The Internet in Alberta Agriculture, Food and Rural Development

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Agriculture Surfs the Internet

During the Agriculture Ministry's round table discussions "Creating Tomorrow", our stakeholders made it quite clear that information technology would, in the future, play a bigger role in the business of Agriculture.

In the Department's business plan published a year ago, it committed to investigate how the electronic highway could be used to more effectively deliver information and services to producers and processors.

With the assistance of a team of consultants from Price Waterhouse, the Department has developed plans to initiate a pilot project to test an electronic delivery mechanism. In developing this plan, it consulted with 15 producers via a workshop to advise on needs, wants and opportunities for electronic delivery. Their input was invaluable.

The commodity selected for the pilot project is barley. This selection was based on the fact that barley is a significant crop in the areas which currently have toll-free access to the Internet. Other commodities are scheduled for inclusion in the future.

The pilot project is called **Project Barley.** It will include approximately 100 producers using Internet and the World Wide Web capabilities. Producers will not only have access to agricultural databases created by the department, but will also have world-wide access to any other information on the Internet.

What Is Project Barley?

Project Barley will introduce Alberta barley farmers to the Internet. Participants will discover the agricultural information and services available electronically from Alberta Agriculture, Food and Rural Development (AAFRD) and the rest of the world.

Project Barley has three primary objectives:

- ✔ To test the Internet's usefulness in delivering agricultural information.
- ✔ To test the system's ability to accommodate different types and forms of information.
- ✔ To measure user interest and satisfaction.

What Will It Do?

Project Barley will:

- ✔ Provide information on crop management, farm equipment, harvesting, soil fertility, irrigation, pests, marketing, costs of production, etc.
- ✔ Add information as the pilot progresses.
- ✔ Provide guided access to other Internet information of interest and value.
- ✔ Provide a discussion forum for the pilot users.
- ✔ Provide pilot users access to electronic mail.
- ✔ Identify the AAFRD as a gateway to agriculture and food information on the Internet.

Where Will It Be?

Project Barley involves farmers and farm suppliers from the following 14 districts:

Grande Prairie	Vegreville	Wetaskiwin
Lacombe	Olds	Airdrie
Strathmore	Stony Plain	Innisfail
Camrose	Stettler	
Three Hills	Leduc	

Viking (in the Community Futures Office)

A computer kiosk will be placed in the 13 district offices and in the Community Futures Office in Viking to allow farmers to test-surf the Internet. Department staff are also working with Internet providers and the telephone companies to include them in the pilot project and to arrange for Internet access that will make its use affordable and practical.

When Will It Start?

The pilot is currently underway with an official kickoff scheduled for early June.

What Happens Next?

At the end of the pilot, the project will be evaluated from both the user's and the Department's perspective. A combination of on-line questions and one-on-one contacts will be used in the evaluation.

With the completion of a successful pilot project, the Department will expand its comprehensive electronic service by creating new commodity and product information. This will increase the depth and breadth of AAFRD's presence on the Internet.

The ongoing electronic delivery of information and services will parallel the traditional delivery of extension services through publications, seminars, home study courses and computer software.

In our view, this exciting project will lead to enhancing rural development and contribute to the **"Alberta Advantage".**

Meet Duke

Duke is the name of Project Barley's mascot. The name alludes to both a registered barley variety and the name of a famous Hawaiian surfer, Duke Kahanamoku.

Duke was developed by Bruce Perry of Agricultural Education and Community Services. Jacqueline Galloway, of the farm safety program, collected the name-the-mascot prize for naming Duke. Other Alberta Agriculture staffers who suggested the same name were Colin Draffin of information technology services, Wayne Goruk of central program support, and Gay Mowat of the Strathmore district office.

How Do I Find Out More?

You can reach Duke at:

- ✔ Voice-telephone: (403) 427-2101 (ask for Duke)
- ✔ Internet address (URL): http://www.gov.ab.ca/~agric
- ✔ Electronic mail (e-mail) address: duke@agric.gov.ab.ca

What This Book Is About

Now that you know about Project Barley, what about the Internet? You have probably heard about the Internet. Clearly Alberta Agriculture thinks it's important. And someone may have said "You've got to get connected!" You may have heard about it on TV or read a magazine article. But you still aren't sure what the Internet is or why you might remotely be interested in it.

You may even have gone to a bookstore to see if there was something you could read, only to find that, yes indeed, there are books on the Internet. All of them four inches thick. Well, some of them are good references. But what you really need is an overview. And information about what's here in your part of the world – not in New York or California.

That's what this book is for. It's not an in-depth review of the Internet. It's not a reference manual for commands. It is an introduction, a quick peek to help you out. It will give you an idea about what the Internet is and help you decide if you care.

This book will answer the following questions:

- ✔ What is the Internet?
- ✔ What can I do with it?
- ✔ What are the rules for using the Internet?
- ✔ Where can I get access in this province?
- ✔ What resources are there on the Internet for agricultural operators?

Objectives

After you read through this book, you will be able to:

1. Define what the Internet is.
2. List and describe the following Internet services:
   - ✔ Electronic Mail.
   - ✔ Mailing Lists.
   - ✔ Usenet.
   - ✔ Remote Login.
   - ✔ Navigator Programs.
   - ✔ Anonymous FTP.
   - ✔ Electronic Magazines.
   - ✔ Talk and Chat.
   - ✔ World Wide Web
3. Identify which Internet services will be of use to you.
4. Discuss rules and guidelines for Internet use.
5. Explain four levels of access to the Internet.
6. List the access providers in your area and describe how you can get access to the Internet through these providers.
7. Select a service provider appropriate to your needs.

What Is the Internet?

A Definition

The Internet is a collection of computer networks. It connects literally thousands of networks with millions of computers worldwide. Those computers are connected to tens of millions of users. And the Internet is growing fast.

Who Does It Involve?

About 20-30 million people. All sorts of people with all sorts of interests: academics, business people, professionals, elementary school kids, sports fans, music lovers, activists – you name it. They get together (electronically) to exchange ideas, work on projects, and even carry on romances.

Who Runs It?

What's interesting is that there is no one organization called "the Internet." Each individual computer or computer network is its own boss. It voluntarily connects with the rest of the world in a kind of giant communication cooperative. That means that you can join, too.

How Did It Start?

In 1969, the U.S. Department of Defense started a network among its researchers at four universities. The network was designed to be an experiment to decide how communications between locations could be made more reliable. It was structured so it didn't depend on any one computer or communication link. The network was used primarily for defense research throughout the 1970's and into the 1980's. In the 1980's, the network was opened up to researchers at a number of major U.S. locations. Since then, the idea has caught on. Computers and computer networks all over the world have been joining up to let users "talk" to each other and access information.

Relation to Other On-line Services

Using a computer to call up an information source in the sky is, of course, not new. On-line bulletin board systems (BBS) have flourished for years. Major services like Compuserve have been in operation since the 1980's and have hundreds of thousands of users. Information resources like Dialog provide journal indexing services to professionals throughout North America. What makes the Internet different is its lack of central administration and its collaborative/cooperative nature.

The Structure of the Internet in Alberta

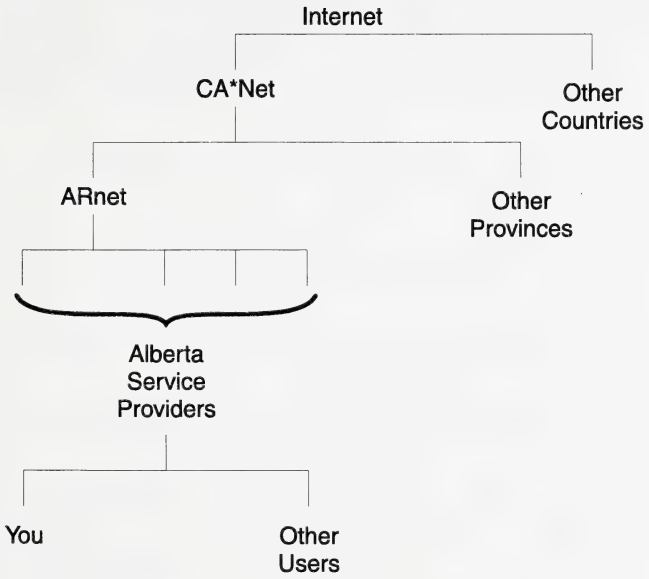
While the Internet as a whole is not owned or controlled by any one entity, there are groups that have ownership and/or control over parts of the net.

- ✔ **CA*Net** – the national group which sets Internet use and telecommunications standards across Canada. This is the main cross-Canada communication line (called a backbone).

- ✔ **ARnet** – the main backbone for Alberta. It is called ARnet because it was brought into Alberta by the Alberta Research Council.

- ✔ **Alberta Service Providers** – these are organizations that provide local access to the Internet. They can be private companies, public institutions, societies, or government agencies. At this level, access can be restricted in the number and type of services (Internet or otherwise) available, and who is allowed to use these services. See Page 35 in this book for information on specific providers in Alberta.

- ✔ **Individual Computers and Networks** – these are the individual users who access the Internet (like you). They can be individuals, educational institutions, associations, government departments, or businesses.


Internet
CA*Net
Other Countries
ARnet
Other Provinces
Alberta Service Providers
You
Other Users

Internet Services

What services you have access to will depend on what your service provider offers. What services you want will depend on what you want to do. The most common services are:

- ✔ **Electronic Mail** – send messages to another individual user, anywhere in the world.
- ✔ **Mailing Lists** – exchange messages with people who have interests in common with you.
- ✔ **Usenet** – another way to exchange messages with people who have interests in common with you.
- ✔ **Remote Login** – run programs on another computer (usually searches of databases).
- ✔ **Navigator Programs** – use a variety of programs to search the Internet for specific information.
- ✔ **Anonymous FTP** – copy files (documents or computer programs) from another computer.
- ✔ **Electronic Magazines** – subscribe to magazines that come to you electronically.
- ✔ **Talk and Chat** – exchange messages in "real time" – like having a written telephone conversation.
- ✔ **World Wide Web** – access information in the form of text, hypertext, graphics, photographic quality images, motion images, and sound.

The following pages describe these services in more detail. Note that these are general descriptions. Exact procedures will vary depending on the service provider you use.

Electronic Mail

A Definition

Internet e-mail is probably the most used Internet service. If someone else has an Internet address, you can send messages to them. Other networks, like Compuserve, Delphi, Prodigy, Bitnet, Freenet, and so forth are also accessible by Internet e-mail.

Sending E-mail

The process is simple:

1. Turn on your computer.

2. Use your modem and modem software to call up your Internet access provider. (They will have given you the number.)

3. Ask for the mail program.

4. Type in your friend's Internet address.

5. Type in your message. (You can also attach a file from your word processing program.)

6. Tell the mail program to send your message.

Getting E-mail

Getting mail is easy. It comes to you automatically. When you ask for the mail program (as in Step 3 above), a list of your messages appears on your screen. You can read them, reply or save them, or delete them at any time.

So What???

Why do you want to use e-mail – after all, telephones still work, don't they? Because you can send written documents. The other person doesn't have to be there to answer the phone and you can leave a longer message than you can on an answering machine. Not to mention you have time to think about what you want to say. And mostly – because it's cheap. You don't pay any long distance fees.

Here are some ideas for using Internet e-mail:

- ✔ **For Businesses** – you can communicate with branch offices or staff in the field, with colleagues, or with suppliers. The key to using Internet e-mail is that it is inexpensive. It can replace local and long distance telephone, fax, and courier communications.

- ✔ **For Parents and Relatives** – this has got to be the cheapest way to keep in touch with students away from home or relatives in other countries. The only thing Internet e-mail does not let you do is hear someone's voice. But you can save that for special occasions (or use World Wide Web – see Page 27). If you want a detailed account of you daughter's love life, the latest gossip from the old country, or a discussion on the latest soccer scores – use the Internet.

An Example

A person living in Edmonton is on the Board of Directors of a national organization. Other members of the Board live and work in Ottawa, Toronto, Sault Ste Marie, Saskatoon, Sherwood Park, and Nanaimo.

Before the Internet, the cost of telephone and fax between these seven people was several thousand dollars a year. Now they are in almost daily contact for no cost except their annual hookup fee. They ask for advice and react to proposals, and they do it on their own schedule. When the member in Edmonton sends out a note (usually first thing in the morning), it sits and waits for the member in Ottawa who answers his mail at the end of the day. Each month the user member in Edmonton sends or receives up to 100 messages from other members of the Board. Of course, our example user talks to a lot of other people as well.

Here's how it works. The member in Ottawa dials his Internet number and connects through his service provider. He then types a command to call up his mail. He selects a message to read and gets:

```
From:           bob@sas.ab.ca
Subject:        Information on school projects
To:             lex@abc.carleton.ca (Lex MacMillan)
Date:           Wed, 16 Mar 94 13:42:15 MST

Lex - We have some people out here interested in
school based projects - anything to do with
projects to use the Internet for schools
(teachers and kids).  Know anything about
projects like this?

By the way, the material for the conference looks
fine.  I'll send it on to the conference chair
for inclusion in the proceedings.

Bob
```

Mailing Lists

A Definition

If e-mail isn't the most used Internet service, then mailing lists are. A mailing list is a group of people around the world who correspond through the Internet on a specific topic. It's like joining a club... or a professional association.

Subscribing to a Mailing List

Subscribing to a mailing list isn't hard. Deciding which one(s) to subscribe to is. There are literally thousands of lists covering serious and not-so-serious topics. They range from Anglo-Saxon studies to yachting. There are mailing lists on camels, nuclear physics, music (of all types), medicine, education, different languages, humour, addictions – just about anything you can name. And if you don't find one for a topic you have a great interest in, you can start your own mailing list.

You can get on most mailing lists by e-mailing the list and saying SUBSCRIBE and your name. Some lists are restricted to members of specific associations or groups. Other lists require you to send a brief autobiography or the reasons you want to subscribe. Some lists are open to all but are moderated – the list owner reviews messages to the list to make sure they are on topic.

There are books available which describe many of the mailing lists and their subscription procedures. There are also some mailing lists on the Internet that simply describe mailing lists on the Internet. And you can always e-mail an existing mailing list that is close to the topic you're interested in and ask if anyone knows about a list in a specific topic... or would like to start one.

Getting Off a Mailing List

Sometimes there's too much of a good thing. You can get on so many mailing lists that you have to be reading constantly all day just to keep up. This is okay as long as you don't have anything else to do. But you may decide that your job or your spouse needs some attention. Un-subscribing to a mailing list is as easy as subscribing to one. Just send a message (usually SIGNOFF) to the list and you're off of it.

So What???

If mailing lists are like clubs, why not just join a local club? Well, when was the last time you could exchange ideas – or information – or cross stitch patterns – with the rest of the world? Using the mail for exchanging ideas is slow, telephone and traveling to conferences is expensive. Mailing lists let you expand your world at a reasonable cost. Here are some ideas for using Internet mailing lists:

- ✔ **For Businesses** – you can get quick answers to tough problems, whether you're dealing with asbestos in a building or trying to get a computer network to behave. You can also find out what's happening in your field – where the markets are, what new products are coming. You can even survey potential markets for interest or product ideas. But note that blatant advertising on mailing lists is not allowed. You can, however, provide information if it is requested. You can also set up your own mailing list for your company or product(s). Your customers can ask questions, get new product information, even order from you through your mailing list.

- ✔ **For Professionals** – you can participate in forums and converse with colleagues. You can even work on papers together over the Internet.

- ✔ **For Community and Help Groups** – you can find out how others are handling specific problems. You can ask for help and ideas on dealing with problems your group is wrestling with – alcohol, AIDS, abuse, and others.

- ✔ **For Hobbyists** – there's probably a mailing list for every hobby: camels, cars, cross-stitch, comics, baseball cards, golden retrievers, model railroads, motorcycles, music, rock groups, sports (of all types), theatre, UFOs, Welsh – to name a few. Ask for information. Offer your opinion. Ask for help. Find out if someone else has that one collectible you've been looking for. Have fun!

- ✔ **For Parents** – there are Internet groups just for children. These groups encourage worldwide communication among children in different nations. Your child can also use the Internet for term paper research. You can help them ask a question of an expert – most people are glad to help someone who is interested in their subject area. It's part of the friendly nature of the Internet.

- ✔ **For Students** – how would you like to ask a group of experts for help on your next major paper? Or get the scoop on the next discussion topic so you can look like a hero in class (and maybe learn something, too)? Call up the Internet and get connected. This is the future... your future.

An Example

The same Internet user described in the e-mail example also belongs to the mailing list set up by his association. If he has a concern, question, or comment to make to the list, he sends his message to a host computer which is located at a college in British Columbia. That computer copies his message to every subscriber on this list. Whenever he signs into his e-mail, he sees messages broadcast from the mailing list that he can read, delete, or answer. When he decides to respond to a note, he can send that response directly to the originator or, if he thinks his response would be of interest to others, he can send it to the entire mailing list.

Here's how it works. The user dials his Internet number and connects through his service provider. He then types a command to call up his mail. In addition to mail for him specifically, there are mailings from other subscribers to the mailing list. The user selects a message to read and gets:

```
Date:           Thu, 17 Mar 94 10:20:02 EST
Reply-To:       ASSN-L
Sender:         ASSN-L
Subject:        Information on Internet references
To:             Multiple recipients of list ASSN-L

I'm trying to collect a list of Internet
references (books, mailing lists, etc.).  If you
have some you can recommend, please e-mail me
directly (lex@abc.carleton.ca).  I'll post the
final list when I'm done.  Thanks.

Lex
```

Usenet

A Definition

Usenets (also called newsnet, netnews, newsgroups, and network news) are an updated form of the mailing list. They are lists that are organized according to subject.

The basic difference between mailing lists and newsgroups is that mailing list messages come to you specifically. Messages in newsgroups are posted to a common place. You read newsgroup messages almost like you would read messages on a bulletin board.

Newsgroups tend to be high volume communication. Not all service providers provide access to all newsgroups because of the time it takes to copy them to their local computer (so you can access the newsgroup), and the amount of storage space they take.

Some of the more common usenet categories are:

- ✔ **.ab** – topics of interest to Albertans, including job listings.
- ✔ **.alt** – a wide collection of topics including agriculture, Chinese, culture and folklore from many different nations, history, humour, music, parapsychology, politics, religion, sports, and television shows.
- ✔ **.bionet** – topics for professional biologists like agroforestry, genetics, immunology, and molecular biology.
- ✔ **.can** – topics of interest to Canadians, including job listings, legal issues, and government policies and studies.
- ✔ **.comp** – computer topics like databases, graphics, different computer languages and operating systems, multimedia, Windows, CD-ROM, security, information on specific brands of computers, and locations for programs which can be copied through the Internet.

- ✔ **.edm** – topics of interest to Edmontonians.
- ✔ **.k-12** – for kids including arrangements for casual conversation among kids of various age levels and information on various topics.
- ✔ **.news** – about the usenet system.
- ✔ **.rec** – recreational topics such as the arts, cars, aviation, bicycles, crafts, games, model building, motorcycles, music and performers, amateur radio, and all types of sports.
- ✔ **.sci** – generally scholarly discussion on various science topics including archaeology, astronomy, chemistry, electronics, mathematics, philosophy, and space.
- ✔ **.soc** – social issues including culture from all over the world, religion, and human rights.
- ✔ **.talk** – conversational and often controversial topics like abortion, environment, politics, and religion.

There is a specific procedure for creating new newsgroups to make sure they fit in and don't overlap existing groups unnecessarily.

How It Works

Newsgroups organize the messages they receive into threads – messages that follow a specific topic. Using a news reader program, you can follow the threads you're interested in and ignore the rest. You can send messages and reply to articles in the thread by using e-mail.

So What???

So which do you want – newsgroups or mailing lists? Well, you probably want both. Some of the topics are the same in both services, but they may not include the same people. And there are some topics that appear in only one or the other service. Anything you can do with mailing lists you can do with newsgroups – with one

exception. Newsgroups are not as easy to start as mailing lists. Set procedures have been developed, however, to help you get a newsgroup going if you want to.

An Example

Our sample user also belongs to a number of newsgroups relating to education. Through these newsgroups, he can find out what is going on in the world in various educational areas. He can ask questions, provide information, or participate in projects.

Here's how it works. The user dials his Internet number and connects through his service provider. He then types a command to call up the newsgroups he has subscribed to. He can then go through each message and read, delete, or reply to it. Messages look like this:

```
From:           bob@sas.ab.ca (Bob Christie)
Subject:        Educational experience with Internet
Message-ID:     bob@sas.ab.ca
Organization:   Management Resource Group
Date:           Sat, 2 Apr 1994 23:20:59 MST
Lines:          11

Our company is doing consulting work with school
systems.  We're trying to get some ideas on how
to use the Internet in schools.  Would anyone who
has had experience in this area please provide us
with a brief description of what you did and how
it went?

Please reply directly to my e-mail.  I will make
a summary available to anyone who wants it.

Thanks.
```

Remote Login

A Definition

Remote login (also called telnet or a telnet session) is logging onto someone else's computer system (called a host) to use specific resources. Note that access to log in and the resources which you can use are controlled by the host computer owner. This means that you can't just dial up anyone and do whatever you want. It also means that no one else can call up your computer without your permission.

Library Systems

One major source of on-line resources available through the Internet are the OPACs – Online Public Access Catalogs. There are more than 1,000 library catalogs which you can search from your home computer. Once you find a book you would like to see, you can go through your local library to ask for an interlibrary loan for the book (this works best for libraries within Canada). Western Canadian libraries with OPAC include:

- ✔ Athabasca University (Alberta)
- ✔ Camosun College (British Columbia)
- ✔ Malaspina College (British Columbia)
- ✔ Saskatoon Public Library (Saskatchewan)
- ✔ Simon Fraser University (British Columbia)
- ✔ St. Boniface General Hospital Libraries (Manitoba)
- ✔ University of Alberta (Alberta)
- ✔ University of British Columbia (British Columbia)
- ✔ University of Calgary (Alberta)
- ✔ University of Lethbridge (Alberta)
- ✔ University of Manitoba Libraries (Manitoba)
- ✔ University of Saskatchewan (Saskatchewan)
- ✔ University of Victoria (British Columbia)

Other Resources

You can use telnet to access information from groups as diverse as community colleges and NASA. You can get everything from phone numbers in Germany to the latest regional weather report. However, most of these resources are accessed using an Internet navigator program. These navigator programs – Gopher, Archie, Veronica, and others – are discussed in the following section.

So What???

If you want to do more than just hold conversations on the Internet, you will use telnet sessions – in some form. If your job or hobby has a heavy research component, you can use OPACs to uncover hard-to-find resources. Even if you're not into pure research, read on – the Internet has hundreds of resources organized by subject that you can reach using a navigator program.

Navigator Programs

A Definition

There are hundreds of locations throughout the world that have information you can use. The problem is often not whether the information is out there, but how to find it. Other people have had the same trouble. They've developed navigator programs to go and look for information for you. These are programs that are available either locally on your service provider's computer or through a telnet session on a distant computer.

There are several types of navigator programs:

- ✔ **Gopher** – used for talking to computers that are set up to listen to Gopher commands. Gopher provides a list of choices to you in a menu format. You can work through different levels of information by selecting menu items. For example, you can call up one of the computers which runs Gopher at NASA's Goddard Space Flight Centre and get a menu of information. From that menu you can select "space shuttle schedules" and get a list of the upcoming shuttle launches. Gopher is easy to use. After you're connected to the Internet, just type "gopher" and the address of the computer you want to access. Gopher will go to that computer and bring back your list of choices.

- ✔ **Veronica** – will search all Gopher accessible menus for specific words. If you want to find all the sources for information on space shuttles, you can ask Veronica to search all of the menus of all of the computers running Gopher for the words, "space shuttles." Veronica will come back to you with a list of the places you can access for space shuttle information.

- ✔ **Jughead** – Jughead is like Veronica except that Jughead will only search a restricted part of the Internet. If you only want information on space shuttles in Canada and not in the U.S. or former Soviet Union, you can tell Jughead to only search in Canada.

- ✔ **Wais (Wide Area Information Service)** – used to search for any word or words in a collection of information. There are fewer Wais accessible computers than there are Gopher accessible computers. However, Wais lets you search the entire collection of information, not just menu headings that describe the information the computer has. For example, you can search all of the recent U.S. White House press briefings for a specific word, like "HIV", for example, to get a list of press briefings that deal with the approach the U.S. government may be taking to HIV issues.

What Information Can I Find?

Of course, we can't list the hundreds of resources available to you, but here's a sampling:

Gopher, Veronica, and Jughead

- ✔ Campus information for numerous universities around the world.
- ✔ Economic and business data for different areas.
- ✔ EnviroGopher – environmental information of all sorts.
- ✔ Genetic maps of wheat, barley, oats, and sugarcane.
- ✔ On-line bookstores.
- ✔ United Nations information, including programs, environment related information and press releases.
- ✔ The Weather Machine – access to weather images and current U.S. National Weather Service reports.
- ✔ Educational Software – free from the U.S. Department of Education.
- ✔ Material Safety Data Sheets – documents that describe the safe use of specific chemicals collected by the U.S. Occupational Safety and Health Administration (OSHA).

Wais

- ✔ CIA World Factbooks.
- ✔ Multimedia database of CDs (audio) including a description, image of the cover of the CD, and a short audio sample.
- ✔ Satellite weather maps and information.
- ✔ Sheet music in the Duke University Libraries.
- ✔ Software and courseware reviews for use at all grade levels.
- ✔ White pages – telephone directories of various areas, people, and Internet hosts.
- ✔ Windows NT operating system.

So What???

If you want to use the Internet to find information, you will need to use one or more navigator programs. Which one you use, of course, will depend on the type of information you are looking for.

And do you really care about all of this information? After all, haven't you lived all this time without it? That may be true – for now. But don't forget the future. As the use of the Internet becomes more common, all your friends and neighbours (not to mention colleagues, business competitors, other students, etc.) will start calling up the world. You will have to use the Internet resources to catch up. On the other hand, you could be the first in your block...

Here are some ideas for using Internet navigator programs:

- ✔ **For Businesses** – like using mailing lists or newsgroups, you can find out what's happening in your field. Except that by using navigator programs to find information, you can browse through what the world has to offer rather than waiting for topics to come up in a "conversation." You can also set up your own gopher or wais service to help your customers get product information or order products. This would be like setting up a mailing list, but could be easier for your customers to use.

- ✔ **For Professionals** – you can locate data for research purposes or read reports of research done at other institutions.

✔ **For Students** – you can look up information for a large number of topics which you can then use in research projects, papers, science fair projects, etc.

An Example

Gopher is one of the most used navigators on the Internet. For example, our sample user wants to see what is available on the computer run by his association. He dials his Internet number and connects through his service provider. Then he types:

```
gopher gopher.assn-1.sas.ab.ca
```

The association's computer responds with the following menu. The user types in the number of the menu item he wants to see to bring up subsequent menus or items.

```
Internet Gopher Information Client 2.0 p10

        Association Main Menu

1.   About the Association
2.   News Archive
3.   Current Events, Conferences, and Schedules
4.   Conference '95
5.   Member Directory
6.   References and Resources
7.   Software
8.   Ongoing Projects
10.  Member Feedback

Press ? for Help. q to Quit, u to go up a menu

                                          Page 1/1
```

World Wide Web

A Definition

World Wide Web (the Web, WOW, or W3) is the latest improvement in Internet communications. The Web combines text, hypertext, graphics, photographic quality images, motion images, and sound on Web "pages" that you can access.

The Web was originally developed by CAN to let their researchers exchange visual data. Now the Web is used for everything from watching the coffee pot at Dart mouth to viewing the latest Jupiter-comet collisions. The Web is the rising star of Internet services. In November of 1993, there were less than a dozen publicly accessible Web sites. By March of 1995, there were over 2.2 million public Web sites. Individuals, associations, universities, government agencies, and businesses are all starting their own Web pages.

What's on These Web Sites?

Like the rest of the Internet – everything! Here are some of the more popular sites:

- ✔ ***The Louver*** – take a virtual tour of their galleries.
- ✔ ***NAPS*** – check out the latest space images. In July of 1994, NAPS made the comet-Jupiter images available as they were processed. More than 300,000 people accessed these images in one week.
- ✔ ***Open Government*** – our very own federal government's offering.
- ✔ ***The Vatican*** – view maps of early Rome that have been hidden in the depths of the Vatican library for centuries.
- ✔ ***Dead Sea Scrolls*** – your own personal viewing of these rare and fragile documents.
- ✔ ***Cybermall*** – browse through a "virtual mall" and buy (non-virtually) what interests you.

With 2 Million Sites, How Can I Find Anything?

Well, that can be something of a problem. But you have two things going for you:

- ✔ **Web Indices** – several groups have developed programs to search the Web and make up an index. You can access these sites and search the index for a specific topic.

- ✔ **Pointers** – it is considered good manners to include hypertext links to other related or interesting Web pages in your Web page. Most people provide these links to other sites. If you can find a site that interests you, look for links to other places you can "visit."

What Do I Need To Access the Web?

Web pages have a lot of information on them. This has implications for you in terms of equipment and the speed of the telephone line that you use. To get the full effect of the Web, you will need a computer that is capable of sound, has a reasonably high resolution display, and is reasonably fast, since processing sound or motion images takes time. You will also need a fast connection to your information provider so you can transfer the sound or images fast enough for them to make sense (and not take all day). You can ask you access provider for help in sorting all this out.

What if you don't have a fancy computer with all the bells and whistles? You can still access Web pages – as long as you are willing to do without the images and/or sound. There are Web access programs that will just give you the text and hypertext so you can still access the information.

So What???

The Web is new, but it is definitely here to stay. For many people, it will be the way they communicate, learn, and do business in the not-too-distant future. Some experts have compared the Web with television in its ability to change and shape our understanding of the world. Here are some ideas:

- ✔ **For Businesses** – you can advertise and market to your heart's content. Because people come to you, the Internet community does not have a problem with your marketing through Web pages. You can show (or demonstrate) your products, take surveys, and even provide order forms for your customers.
- ✔ **For Students** – like the rest of the Internet, Web pages are great for research. And you can get pictures and sound as well as text.
- ✔ **For Teachers** – if the Internet was a great resource before, it's gotten even better with the Web. Government departments, educational suppliers, and educational institutions all have Web pages. And a growing number of public schools have Web pages, too – even kids in Grade 3 have put up their own Web pages!
- ✔ **For Hobbyists** – as with mailing lists and newsgroups, just about every interest is represented on Web pages. And it's relatively easy to develop your own Web page (assuming your access provider allows it). You can put up your contribution to your area of interest and link to others who have similar pages.
- ✔ **For Art and Museum Enthusiasts** – if ever there was a way to see the world's great art collections and museums in the comfort of your home, this is it. Unlike television, you can spend as much time as you want looking at just that one painting. And you can go back as often as you want. Some art galleries and museums even let you order posters, prints, or originals when you "visit" them.
- ✔ **For Catalog Shopper Fanatics** – this is it. Look no further. Even as you read this book, someone is setting up another "virtual store"!

Anonymous FTP

A Definition

Anonymous FTP (File Transfer Protocol) is simply accessing another computer on the Internet and copying a file from that computer to your computer. The file can contain anything – text, graphics, sound, even a computer program. Both the file and its transfer are free.

What Files Are There?

There are thousands of computer sites that allow anonymous FTP access. Here's a sample of what they contain:

- ✔ Computer programs – many, many, many programs of all types and languages for all sorts of computers.
- ✔ Computer program and language reference manuals.
- ✔ Bibliographies, documents, and databases for biological research.
- ✔ Language and literature of China, Japan, and Vietnam.
- ✔ Information about medical research.
- ✔ Movie ratings.
- ✔ Books – that is, the full text of selected books, conference proceedings, and reference material.

How Do I Find a File?

Because there are so many FTP sites around the world, a program similar to Gopher has been developed to look for specific files throughout all the sites in the world. This program is called Archie. You can tell Archie to look for a specific file or for files on specific topics. Once Archie has found what you want, you can tell Archie to copy the file to your computer.

So What???

You need to know how to copy files from another computer to yours so you can get programs and data. This can be useful whether you're a business, a researcher, or a student.

An Example

Our sample mailing list user can call up news articles from his Association's computer. He dials his Internet number and connects through his service provider. Then he types:

```
ftp assn-l.sas.ab.ca
```

This connects him to the association computer. From there, he types:

```
get news.txt
```

and the computer sends him the contents of the latest news articles that are on the association computer. These news articles are automatically stored on the user's computer in a file called news.txt which he can bring into a word processor to read or print.

Electronic Magazines

A Definition

An electronic magazine is a magazine that comes in electronic rather than print form. Some electronic magazines are offered as files that you must copy (through anonymous FTP) to your computer to read. Other electronic magazines are available through mailing list subscriptions.

What Magazines Are Available?

There are several hundreds of magazines ranging from serious topics to simply ridiculous. Here's a sampling:

- ✔ ***AIDS Treatment News*** – reports on experimental and standard treatments.
- ✔ ***Braille Forum*** – newsletter from the American Council of the Blind.
- ✔ ***Cult of the Dead Cow*** – just very strange.
- ✔ ***EDUPAGE*** – weekly summary of news items on information technology.
- ✔ ***Internet Business Journal*** – news of successful ventures related to the Internet.
- ✔ ***KIDLINK Newsletter*** – a newsletter describing projects which encourage the use of the Internet by children.
- ✔ ***NEAR FUTURES*** – publishing news from TOR Books (a science fiction/fantasy publisher).
- ✔ ***Sonic Verse (TM) Music Magazine*** – reviews of current music.
- ✔ ***SpaceViews*** – about space exploration.
- ✔ ***Windows Online Review*** – about Windows from Microsoft.

So What???

When was the last time you got a free magazine?

Talk and Chat

A Definition

You can also use the Internet to hold "real time" conversations – sending messages back and forth just like talking on a telephone. There are two different ways to do this.

Talk

Talking using the Internet is just like talking on the telephone (except you type your conversation). You call up the person you want to talk to by giving his or her Internet address. If that person is at their computer and signed onto the Internet, he or she will get a message on the screen to say that you want to talk. Once he or she responds, you can carry on your conversation.

Chat

Chat (also called Internet Relay Chat or IRC) works like a 24 hour, world wide CB radio channel. Actually there are many channels. Some of these channels are for discussing specific topics. Other channels are just for chatting on any subject. You can start a channel or join one that's going on. You can even invite specific people to join your channel at a specific time and restrict access to only those people you've invited.

So What???

Talk is cheap (so the saying goes). On the Internet, talk really is cheap. If you need to talk to someone in another town (or country) and don't need to hear the sound of their voice, then use the Internet. Once you've got access to the Internet, it's free.

Chat is useful for "conference calls." Or for having fun. If you like CB radio, you'll love Chat.

Using the Internet

Internet Culture

The Internet is a cooperative experience. You are sharing the communication network with literally millions of other people. There's a lot of give and take. It's sort of like living in a large rooming house with only one kitchen and a limited number of bathrooms. Everyone shares and takes their turn.

General Rules

There are some common courtesy rules on the Internet:

- ✔ **Be Polite** – this is particularly true for e-mail and newsgroups. Remember that what you say will be read (and possibly stored to be re-read) by many people. So don't say something you'll regret later. In fact, if you overstep the bounds of common courtesy, you'll be sure to hear about it. Other Internet users will let you know they don't approve.

- ✔ **Make Sure Your Meaning Will Be Clear** – because no one can see your smile, make sure a "cute" comment will be taken correctly. There are graphic symbols and abbreviations that people use to indicate if they are joking (see Page 51 of this book). These "emoticons" and abbreviations help, but choosing your words carefully is better.

- ✔ **Stick to the Topic** – if you're on a mailing list about history, don't send a long message about your views on the current state of your local government, or on religion, or any other topic not relevant to the list. It clutters up people's "mailboxes" and they'll let you know they disapprove.

- ✔ **Be Considerate** – when you transmit or copy information on the Internet, you are using resources. These may be local resources (like your service provider's) or resources on a distant computer. Other people may be wanting to use these same resources, so be brief and don't copy more (or larger) files than necessary.

Advertising

In general, advertising using other people's mailing lists and usenets is frowned upon by the Internet community. One law firm that sent out an advertisement to every usenet group in the world got 30,000 e-mail complaints in three days! What is acceptable is to reply to requests for information. If you aren't sure how a commercial message might be received on a particular mailing list or newsgroup, ask.

Some mailing lists and newsgroups are specifically dedicated to buying and selling. However, some of these groups are intended more for individuals than for businesses. So it's still a good idea to "listen in" on the postings for a while or simply ask what is appropriate.

You can, of course, start your own mailing list, gopher site, or Web page. The difference is that people can choose to come to your information instead of receiving unsolicited (i.e. junk) e-mail. Many businesses have chosen to set up their own sites (particularly Web pages) and even offer on-line ordering.

Legal Issues

The law has not quite caught up with the Internet, particularly in Canada. The problem is that the Internet is such a new technology that there are no laws that specifically say "Internet" in them. There are, however, laws which govern contracts, communications, and copyright. We can't give you a legal opinion on how you might want to use the Internet, but here are a few areas to keep in mind.

- ✔ **Contracts** – you will have an acceptable use contract with your service provider. You must follow the terms of this contract. These terms will specify what access and services you get for what price. They will also spell out types of things you can use the Internet for (including business and advertising use). User agreements may also include restrictions on the number of hours you can access the Internet or the amount of files you can copy.

- ✔ **Communications** – you cannot use the Internet for anything illegal – like hacking into NASA's computer or ordering stuff on someone else's credit card number. You also can't defame or slander anyone or any group.

- ✔ **Copyright** – don't copy programs, books, or other material from a distant computer that you know you should pay for. If a program or a book is copyrighted when you can hold it in your hand, it is copyrighted when you send it through the telephone lines.

How To Get Access

What You Need

You will need the following items:

- ✔ **Computer** – almost any kind will do – PC, Mac, Amiga, or bigger ones like Dec or IBM mainframes.
- ✔ **Modem** – a device that plugs into your telephone line and (usually) sits inside your computer. Simple ones cost less than $100 at your neighborhood computer store.
- ✔ **Telephone Line** – your home phone line will do just fine. Remember, however, that you can't call up the Internet and have the phone free for voice calls (in or out) at the same time. You may want to order in a second phone line.
- ✔ **Communication Software** – a program that runs on your computer that handles telephone dialing. You can get a communications program at any software store or from a service provider. This software may be included when you buy a modem.
- ✔ **Internet Addresses** – an address that identifies you to the Internet. It will look something like:

  yourname@provider.ab.ca

  The ab stands for Alberta and the ca stands for Canada. Internet addresses are assigned by service providers.
- ✔ **Access Point** – the phone number of your service provider.

Levels of Access

Service providers offer different levels of access, usually with different pricing schedules. Some of the options are:

- ✔ **Polled Services** – usually for e-mail only. The service provider calls the Internet on your behalf to get your mail or post your messages. You can then dial up the service provider's computer to get or send your mail.

- ✔ **Direct Dialup** – you use your computer to dial up to the service provider who puts your call through directly to the Internet. Service providers who offer this level of access may offer all or only a portion of the full range of Internet services (Gopher, Wais, telnet, etc.). If you dial up when there are a lot of other people trying to use the service provider at the same time, you may get a busy signal. You (your computer) will have to keep dialing until a line comes free.

- ✔ **SLIP and PPP** – you connect directly to the Internet through your computer. This gives you all of the Internet services, including sound and images on the Web. There are two types of SLIP/PPP connections: dialup and dedicated. If you have a dedicated connection, you can keep a telephone line (or hard-wired) connection open to your access provider on a permanent basis. You are guaranteed of always being able to access the Internet when you want to. If you use a dialup connection, you call your access provider and the connection acts as a SLIP/PPP connection as long as you keep the phone line open. When you hang up, your access provider stores your information until you dial up again. There are generally different costs associated with each type of SLIP/PPP connection.

- ✔ **Dedicated Lines** – you may be able to arrange with your local telephone company and your access provider to install high speed lines and modems between your computer and your access provider. These will let you transfer information faster, which is useful if you will be copying large files (graphics or satellite maps) or making frequent use of the Web.

- ✔ **Networks** – networks can also be connected to the Internet in any of the above methods. However, you will have to discuss how access will work with your access provider. Most common Internet access levels are for single computers. If you want all of the computers on your network to have Internet access at the same time, you will need special software and setup. Not all providers can/will offer full network access, so check around.

Local Access Providers

There are several types of organizations that can provide Internet access. Each organization will have its own range of Internet and other support services, and pricing schedule. New providers and access points are starting up daily. Contact Duke (427-2101) at Project Barley for up-to-date information.

Calgary

CADVision Development Corp.
1590, 300 - 5th Avenue S.W.
Calgary, Alberta T2P 3C4
Phone: 777-1300
Fax: 777-1319
Internet: http://www.cadvision.com
Type: commercial
Services: all services

Calgary Free-Net Association
810, 400 - 3 Avenue S.W.
Calgary, Alberta T2P 4H2
Phone: 264-9535, 220-3211
Fax: 269-4776
Internet: henry@freenet.calgary.ab.ca
Type: Freenet
Services: all services

Calgary Unix Users' Group
1590, 300 - 5th Avenue, S.W
Calgary, Alberta T2P 3C4
Phone: 265-2289
Fax: 777-1319
Internet: postmaster@cuug.ab.ca
Type: society
Services: all services

CCI Networks
A Division of Corporate Computers Inc.
See Edmonton address
Phone: 237-7737
Fax: 237-7734
Type: commercial
Services: see Edmonton

InterNode Networks
112 Rivergreen Cr. S.E.
Calgary, Alberta T2C 3V6
Phone: 296-1190
Fax: 279-9581
Internet: info@internode.net

Type: commercial
Services: all services

Lexicom Ltd.
60, 203 Lynnview Rd. SE
Calgary, Alberta T2C 1C6
Phone: 255-3615, 258-2601
Fax: 640-2138
Internet: webmaster@lexicom.ab.ca

Type: commercial
Services: all services

Logical Solutions Bulletin Board Systems
Logical Solutions Computer Systems Inc.
4624 Varsity Drive N.W.
Calgary, Alberta T3A 2L9
Modem: 299-9900

Type: BBS
Services: e-mail, text www FTP, telnet, IRC

The Magic BBS
Box #53096
Marlborough Postal Outlet
Calgary, Alberta T2A 7P1
Phone: 248-5798
Internet: root@debug.cuc.ab.ca

Type: BBS
Services: all services

Nucleus Information Service
1835B - 10 Avenue S.W.
Calgary, Alberta T3C 0K2
Phone: 531-8030
Fax: 531-8049
Internet: info@nucleus.com

Type: commercial
Services: all services

Telnet Canada Enterprises
Penthouse 1812 - 4th Street S.W.
Calgary, Alberta T2S 1W1
Phone: 245-1882
Fax: 228-9702
Internet: info@tcel.com

Type: commercial
Services: all services

TNC The Network Centre Ltd.
300, 55 - 4th Avenue SW
Calgary, Alberta T2P 3E7
Phone: 262-3880
Fax: 266-1837
Internet: info@tnc.com
http://www.tnc.com/

Type: commercial
Services: all services

Vertex Communications Inc.
100, Discovery Place One
3553 - 31 Street N.W.
Calgary, Alberta T2L 2K7
Phone: 247-1391
Fax: 282-1238
Internet: http://vertex.worldweb.com/

Type: commercial
Services: e-mail, newsgroups, www

Cold Lake/Grande Centre

SAS Grande Centre
P.O. Box 358
Ardmore, Alberta T0A 0B0
Phone: 826-6894
Internet: kelly@sas.ab.ca

Type: society
Services: planned

Drayton Valley

CCI Networks
A Division of Corporate Computers Inc.
See Edmonton address

Type: commercial
Services: see Edmonton

Edmonton

Alberta SuperNet Inc.
#325 Pacific Plaza
10909 Jasper Avenue
Edmonton, Alberta T5J 3L9
Phone: 441-3663
Fax: 424-0743
Internet: info@supernet.ab.ca

Type: commercial
Services: all services

Amateur Radio
102, 12215 Lansdowne Dr.
Edmonton, Alberta T6H 4L4
Phone: 430-1219
Internet:
mark@ve6mgs.ampr.ab.ca
kirk@ve6kik.ampr.ab.ca
doug@ve6bc.ab.ca
geoff@ugc.ab.ca

Type: society
Services: see Notes
Notes: Free access to all amateur radio (HAM) operators. They supply news and e-mail feeds for others at no charge. They prefer non-amateur systems operate under their own e-mail domain but will supply temporary service.

Bestnet (Best Online)
A Division of CEL Corporation
112, 9650 - 20 Avenue
Advanced Technology Centre
Edmonton, Alberta T8N 1G1
Phone: 448-5910
Modem: 461-3200
Fax: 430-1153
Internet: best@atc.edmonton.ab.ca

Type: commercial
Services: all services

CCI Networks
A Division of Corporate
Computers Inc.
4130 - 95 Street
Edmonton, Alberta T6E 6H5
Phone: 450-6787
Fax: 450-9143
Internet: info@ccinet.ab.ca

Type: commercial
Services: all services

Compusmart
16810 - 104A Avenue
Edmonton, Alberta T5P 4J7
Phone: 429-44388
Internet:
http://www.compusmart.ab.ca

Type: commercial
Services: all services

Edmonton FreeNet
220, 10232 - 112 Street
Edmonton, Alberta T5K 1M4
Phone: 421-1745
Fax: 421-7159
Internet:
help@freenet.edmonton.ab.ca

Type: Freenet
Services: all services
Notes: some restrictions apply

Edmonton Remote Systems
13324 - 138 Street
Edmonton, Alberta T5L 2B4
Phone: 468-2330 (office hours)
454-4054 (evenings before 10)
Access phone: 454-6093,
454-1808, 452-3254
Internet: davem@ersys.edmonton.ab.ca

Type: BBS
Services: e-mail, usenet

Ed Tel PLAnet
Edmonton Telephones
P.O. Box 20500
Edmonton, Alberta T5J 2R4
Phone: 448-4638

Type: commercial
Services: planned
Notes: conditional on CRTC approval

Internet Help (SAS/AACP)
1002, 10611 - 98 Avenue
Edmonton, Alberta T5K 2P7
Phone: 426-7762
Fax: 424-4888
Internet: help@sas.ab.ca

Type: society
Services: all services

OA Internet
4907 - 99 Street
Edmonton, Alberta T6E 4Y1
Phone: 430-0811
Type: commercial
Services: planned

Orbital Online
9732 - 66 Avenue
Edmonton, Alberta T6E 0M3
Phone: 430-0469
Fax: 430-0469
Internet: info@orbital.net
Type: commercial
Services: all services

TICNET, The Internet Companion
Box 72092, Ottewell P.O.
Edmonton, Alberta T6B 3A7
Phone: 474-3975
Internet: info@tic.ab.ca
Type: commercial
Services: all services

TNC The Network Centre Ltd.
11121 - 76 Avenue
Edmonton, Alberta T6G 0K2
Phone: 955-7166
Fax: 944-0233
Internet: info@tnc.com
http://www.tnc.com/
Type: commercial
Services: all services

Vertex Communications Inc.
312 Sigma Place
12120 - 106 Avenue
Edmonton, Alberta T5N 0Z2
Phone: 448-9337
Fax: 448-9352
Internet: http://vertex.worldweb.com/
Type: commercial
Services: all services

Worldgate
16511 - 85 Avenue
Edmonton, Alberta T5R 4A2
Phone: 444-7720, 444-7685
Fax: 444-7720
Internet: info@worldgate.com
Type: commercial
Services: all services

Fort McMurray

Altech Communications
Bay 3, 10015 Centennial Dr.
Ft. McMurray, Alberta T9H 1Y2
Phone: 743-1829
Fax: 791-7092
Internet: Altech@ccinet.ab.ca

Type: commercial
Services: all services

Grande Prairie

CCI Networks
A Division of Corporate
Computers Inc.
See Edmonton address

Type: commerical
Services: see Edmonton

High Level/Fort Vermillion

CCI Networks
A Division of Corporate
Computers Inc.
See Edmonton Address

Type: commercial
Services: planned

Hinton/Edson

CCI Networks
A Division of Corporate
Computers Inc.
See Edmonton Address

Type: commercial
Services: planned

Lethbridge

University of Lethbridge
Computing Services
4401 University Drive
Lethbridge, Alberta T1K 3M4
Phone: 329-2527
Fax: 382-7108
Internet: operator@hg.uleth.ca

Type: university
Services: all services

CCI Networks
A Division of Corporate Computers Inc.
See Edmonton Address

Type: commercial
Services: planned

SAS Lethbridge
515, 7th Street S.
Lethbridge, Alberta T1J 2G8
Phone: 381-3277
Internet: randy@sas.ab.ca

Type: society
Services: planned

Lloydminster

CCI Networks
A Division of Corporate Computers Inc.
See Edmonton Address

Type: commercial
Services: planned

Medicine Hat

CCI Networks
A Division of Corporate Computers Inc.
See Edmonton Address

Type: commercial
Services: planned

Red Deer

Alberta SuperNet Inc.
See Edmonton Address

Type: commercial
Services: see Edmonton

CCI Networks
A Division of Corporate Computers Inc.
See Edmonton Address

Type: commercial
Services: see Edmonton

Infobahn
Box 559
College Heights, Alta T0C O2O
Phone: 1-800-363-1529
343-8500
Fax: 343-8500

Type: commercial
Services all services

Interactive Computer Video
D2085 Gaetz Avenue
Red Deer, Alberta T4R 1Z4
Phone: 1-800-363-2282
340-8848
Fax: 342-1471
Internet: info@supernet.ab.ca

Type: commercial
Services: all services

Slave Lake

Alberta SuperNet Inc.
See Edmonton Address

Type: commercial
Services: see Edmonton

Wetaskiwin

CCI Networks
A Division of Corporate Computers Inc.
See Edmonton Address

Type: commercial
Services: see Edmonton

Other Options

- ✔ **Businesses** – check with your computing department – many large companies already have access to the Internet. Of course, this sort of access is usually intended for business purposes. Be sure to check company policy.

- ✔ **Other On-line Services** – many on-line services act as gateways to the Internet. Compuserve, Delphi, and Prodigy are the most well known. If you already have an account with one of these services, you can ask them how to connect to the Internet. Note, however, that you may not be able to access all Internet services through one of these gateways.

Choosing a Service Provider

Choose a service provider on the basis of four things:

- ✔ **What Types of Services Do I Need?** – if you only need e-mail, don't pay for World Wide Web.

- ✔ **What Level of Access Do I Want?** – generally, polled services are cheapest, but you may want to have access to more services than this level will give you. Check what level provides the services you want.

- ✔ **How Much Support Do I Want?** – you may want someone to call if you have a problem. You might also want training on how to access different Internet services or on ways to use the Internet in your business. You may want to arrange to be notified when mailing lists, newsgroups, or other resources you are interested in start up. Different service providers offer different kinds of support services.

- ✔ **How Much Do I Want To Spend?** – pricing varies widely. You may be charged a sign up fee, hourly rates, monthly rates, storage costs, or some combination of these rates. There may be different rates for access to different Internet services. And different levels of access will usually carry different rates. Additional support services may also carry their own costs.

You can use the sheet on the next page to help you choose a service provider.

Choosing a Service Provider Worksheet

Fill out one worksheet for each service provider. Allow one point for a "Yes" and no points for a "No" **for each service or item you care about**. Fill in the pricing information as well. Then you will have a summary of all of the information about a service provider. The total points will give you a rating of how well a particular service provider will work for you.

Evaluation for:	Yes	No	Do I Care?	Points
Internet Services Available				
E-Mail				
Mailing lists				
Usenet				
Remote login				
Navigator programs				
Gopher				
Veronica				
Jughead				
Wais				
Anonymous FTP				
Electronic magazines				
Talk				
Chat				
WWW				
Other				
Level of Access Available				
Polled				
Dialup				
Dialup SLIP/PPP				
Dedicated SLIP/PPP				
Dedicated line (speed:)				
User Support Available				
Help line				
Training				
Notification of new mailing lists, etc.				
Other				
Subtotal Points This Page				

For this portion of the worksheet, assign points to the costs and other considerations that are important to you. You can assign negative points for those areas that you think are too costly. Even if you do not assign points, you should fill out these sections for future reference.

Evaluation for:	Cost	Do I Care?	Points
Pricing			
Sign up fee:			
Annual rate:			
Monthly rate:			
Hourly rate:			
Storage fee:			
Other:			
Other Considerations			Points
Subtotal Points This Page			
Total Points Both Pages			

Glossary

- ✔ **Access** – using a computer and a telephone to call up the Internet.
- ✔ **Access Provider** – an organization which provides you with an Internet address, an access telephone number, and one or more Internet services.
- ✔ **ARnet** – the Alberta provincial access provider.
- ✔ **Anonymous FTP** – copying information (in a file) from a distant computer to your computer over the Internet.
- ✔ **Backbone** – a major section of the Internet from which smaller portions branch off.
- ✔ **Bitnet** – an international network for (mostly) small universities who don't have access to the Internet. However, Internet users and Bitnet users can communicate.
- ✔ **BBS** – see Bulletin Board Service.
- ✔ **Bulletin Board Service** – a service you can dial up to post information, leave messages, or find out information. Bulletin Board Services are usually local, although some may have gateways to larger services or the Internet.
- ✔ **CA*Net** – the Internet access provider for all of Canada.
- ✔ **Chat** – an Internet service that lets you talk to other users as if you were on a CB radio.
- ✔ **Compuserve** – a commercial on-line service that provides a variety of services including electronic mail, electronic shopping, and special interest groups. Compuserve users can access the Internet through a Compuserve gateway.
- ✔ **Dialog** – a commercial on-line service that provides information.

- ✔ **Delphi** – a commercial on-line service that provides a variety of services including electronic mail, electronic shopping, and special interest groups. Delphi users can access the Internet through a Delphi gateway.

- ✔ **Duke** – the coolest "aggie" ever to surf the Internet.

- ✔ **Electronic Magazines** – magazines that are published as files or through mailing lists on the Internet.

- ✔ **Electronic Mail** – using the Internet (or other communication service) to send messages to another individual user or group of users.

- ✔ **Electronic Mailing List** – an Internet service that sends any messages it receives to all members of the mailing list – sort of a group e-mail.

- ✔ **E-mail** – see electronic mail.

- ✔ **FTP** – see anonymous FTP.

- ✔ **Gateway** – a communication procedure or device that connects two different networks.

- ✔ **Gopher** – an Internet service which is a program that finds information for you by checking all Internet computers that are set up to receive Gopher communications.

- ✔ **Hypertext** – an on-line document that has words in it that are links to more information. Choosing these special words will present the additional information.

- ✔ **Internet** – an international network of computer networks.

- ✔ **Internet Relay Chat** – see Chat.

- ✔ **IRC** – Internet Relay Chat (see Chat).

- ✔ **Jughead** – an Internet service which is a program that finds information for you by checking only those computers in geographic areas which you have selected.
- ✔ **Mailing List** – see electronic mailing list.
- ✔ **Modem** – a device that connects your computer and your telephone line.
- ✔ **Navigator Programs** – Internet service programs that help you find information through the Internet.
- ✔ **Netnews** – see Usenet.
- ✔ **Network** – a computer and group of computer terminals or several computers connected together by wire or other communication devices.
- ✔ **Network News** – see Usenet.
- ✔ **Newsgroup(s)** – see Usenet.
- ✔ **Newsnet** – see Usenet.
- ✔ **Online Public Access Catalog** – an Internet service whereby you can look things up in a library's on-line card catalog.
- ✔ **OPAC** – see Online Public Access Catalog.
- ✔ **Prodigy** – a commercial on-line service that provides a variety of services including electronic mail, electronic shopping, and special interest groups. Prodigy users can access the Internet through a Prodigy gateway.
- ✔ **Real Time** – in reference to communication, real time means communication that takes place instantly. Telephone conversations are real time communications. Mail (electronic or physical) is not real time communication.
- ✔ **Remote Login** – see telnet.

- ✔ **Service Provider** – an organization which provides you with an Internet address, an access telephone number, and one or more Internet services.
- ✔ **Talk** – an Internet service that lets you talk to another user as if you were holding a telephone conversation.
- ✔ **Telnet** – an Internet service which allows you to call up and use the resources of a distant computer.
- ✔ **Telnet Session** – a communication session in which you call up a distant computer.
- ✔ **Usenet** – a mailing list that organizes its messages according to specific topics.
- ✔ **Veronica** – an Internet service which is a program that finds information for you by checking all the Gopher computers on the Internet.
- ✔ **W3** – see World Wide Web.
- ✔ **Wais** – see Wide Area Information Service.
- ✔ **Web** – see World Wide Web
- ✔ **Wide Area Information Service** – an Internet service that lets you look up information on certain Internet computers.
- ✔ **World-Wide Web** – an Internet service that lets you look through information on certain Internet computers using text, hypertext, graphics, photographic quality images, motion images, and sound.
- ✔ **WWW** – see World Wide Web.

Emoticons and Abbreviations

Emoticons

Emoticons are graphic symbols that are used to express emotions on the Internet. You make them by typing characters from the keyboard (colons, semi-colons, parenthesis, etc.). Here are some of the more common ones. You read them by looking at them sideways.

:-) smile

:-(sad face

:-o surprise

:-D laugh

:-> sarcastic smile

;-) wink

:-0 shout

Abbreviations

Some people prefer to use abbreviations. Here are some common ones.

- ✔ **BTW** – by the way.
- ✔ **FYI** – for your information.
- ✔ **IMHO** – in my humble opinion.
- ✔ **IMO** – in my opinion.
- ✔ **OBTW** – oh by the way.
- ✔ **ROTFL** – rolling on the floor laughing.
- ✔ **WRT** – with respect to.

For Further Information

The following books will give you more information about the Internet. You can find them in most bookstores. Remember, however, that the Internet is a changing topic. Many of these books come out with new editions on an annual basis. And each year (or month) new books are being published to help you learn about the Internet.

- ✔ *The Canadian Internet Handbook.* Jim Carroll and Rick Broadhead. Prentice Hall publishers.
- ✔ *Internet Basics.* Steve Lambert and Walt Howe. Random House publishers.
- ✔ *Internet Complete Reference.* Harley Hahn and Rick Stout. Osbourne McGraw-Hill publishers.
- ✔ *Internet: Getting Started.* April Marine and others. SRI International/PTR Prentice Hall publishers.
- ✔ *Internet: Mailing Lists.* Edited by Edward T.L. Hardie and Vivian Neou. SRI International/PTR Prentice Hall publishers.
- ✔ *The Internet Directory.* Eric Braun. Fawcett Columbine publishers.
- ✔ *Using the Internet.* William A. Tolhurst and others. Que Corporation publishers.

Agricultural Resources

Here are some places to surf for agricultural information. As with all Internet sites, these sites and addresses are subject to frequent changes. So surf at your own risk, and, as Duke would say, 'Yahoooo - catch a big one!!!'

- ✔ Duke himself (Alberta Agriculture, Food and Rural Development)
  http://www.gov.ab.ca/~agric
  Duke's e-mail: duke@agric.gov.ab.ca
- ✔ Weather forecasts
  http://www.dow.on.doe.ca
- ✔ College of Agricultural Sciences
  http://bluehen.ags.udel.edu
- ✔ National Institute Pest Managment Network
  http://ipm_www.ncsu.edu
- ✔ Nebraska University Agriculture and Natural Sciences
  http://inlvm.unl.edu
- ✔ Iowa State Entomology Image Gallery
  http://www.public.iastate.edu/~entomology/ImageGallery.html
- ✔ University of Illinois Entomology Department Insect Drawings
  http://www.life.uiuc.edu/Entomology/insectgifs.html
- ✔ Agriculture Network Information Center
  http://www.agnic.org
- ✔ Department of Agriculture and Resource Ecomonics, University of Arizona
  http://ag.arizona.edu/AREC/arechome.html
- ✔ Parkland Agriculture Research Initiative Decision Support System
  gopher://paridss.usask.ca
- ✔ North Carolina State University Library
  gopher://vega.lib.ncsu.edu/library/disciplines/agriculture
- ✔ USA National Agricultureal Library
  gopher://gopher.nalusda.gov
- ✔ Washington State College of Agriculture and Home Economics
  gopher://cru1.cahe.wsu.edu

- ✔ Texas A&M University Poultry Science Gopher
  gopher://Poultry-Gopher.tamu.edu
- ✔ FAEIS Food and Agricultureal Education Information System
  gopher://tam2000.tamu.edu/.dir/faeis.dir/root.dir
- ✔ University of Nevada Agricultural Subjects and Sites
  gopher://gopher.scs.unr.edu/Selected/Agriculture
- ✔ Penn State Agriculture University PENPages
  gopher://psupen.edu
- ✔ Ohio Agriculture Researchand Development Center
  gopher://SUN1.OARDC.OHIO-STATE.EDU
- ✔ Ohio State College of Food, Agricultural and Environmental Sciences
  gopher://gopher.acs.ohio-state.edu/OSU Colleges and Departments/College of Food, Agricultural, and Environmental Sciences
- ✔ United States Department of Agriculture, Economics and Statistics
  gopher://usda.mannlib.cornell.edu
- ✔ GrainGenes, the Triticale Genome Gopher
  gopher://greengenes.cit.cornell.edu
- ✔ Agricultural Genome Gopher
  gopher://probe.nalusda.gov
- ✔ USDA Information on Sustainable Agriculture
  gopher://zeus.esusda.gov/initiatives/sustain
- ✔ Nebraska Institute of Agriculture and Natural Resources
  gopher://ianrvm.unl.edu
- ✔ UI College of Agriculture IDEX BBS
  gopher://129.101.25.2:3000
- ✔ University of Missouri Horiculture Guides
  gopher://bigcat.missouri.edu/reference/guides-h
- ✔ USDA and Other Federal Agency Information
  gopher://zeus.esusda.gov/feds
- ✔ Information Servers - Cooperative Extension System (CES)
  gopher://zeus.esusda/gov/es-gopher

- United Nations Food and Agriculture Organization (FAO) Information
  gopher://gopher.cgnet.com:2070

Newsgroups

alt.agriculture.misc
bionet.biology.grasses
bionet.biology.plants
sci.agriculture
sci.biology
sci.biology.conservation
sci.biology.ecology

Notes

Alberta

AGRICULTURE, FOOD AND
RURAL DEVELOPMENT